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# 2SC1212, 2SC1212A

Silicon NPN Epitaxial

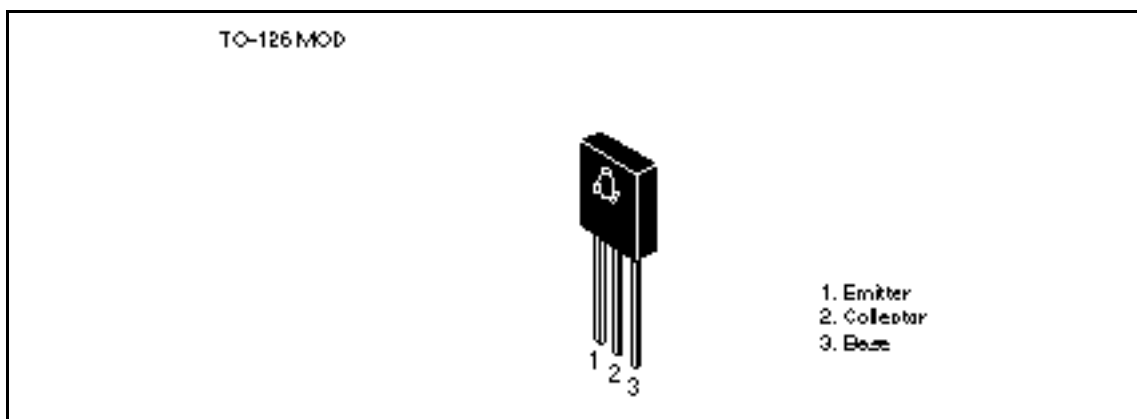
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## Application

Low frequency power amplifier

## Outline



## Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Ratings		Unit
		2SC1212	2SC1212A	
Collector to base voltage	$V_{CBO}$	50	80	V
Collector to emitter voltage	$V_{CEO}$	50	80	V
Emitter to base voltage	$V_{EBO}$	4	4	V
Collector current	$I_C$	1	1	A
Collector power dissipation	$P_C$	0.75	0.75	W
	$P_C^{*1}$	8	8	W
Junction temperature	$T_j$	150	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	-55 to +150	$^\circ\text{C}$

Note: 1. Value at  $T_C = 25^\circ\text{C}$

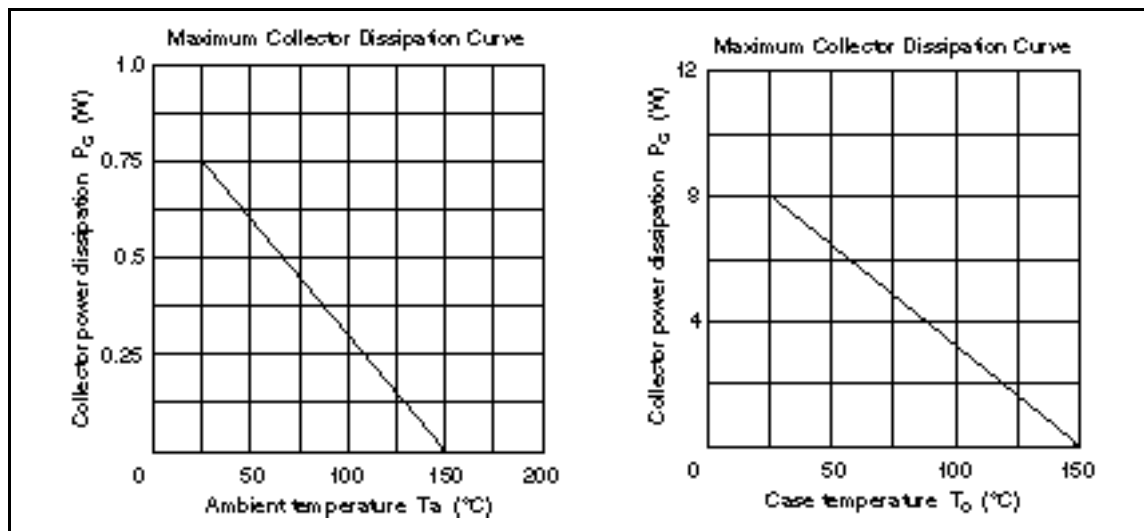
## 2SC1212, 2SC1212A

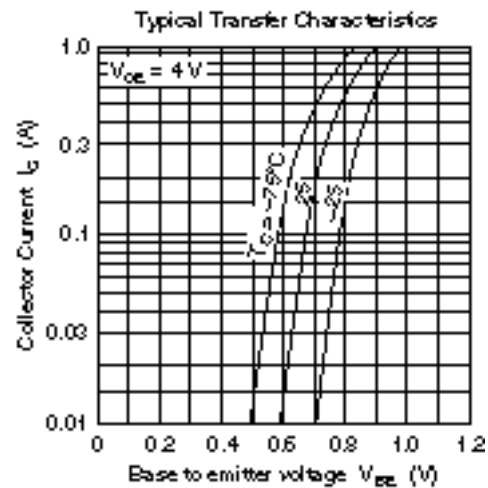
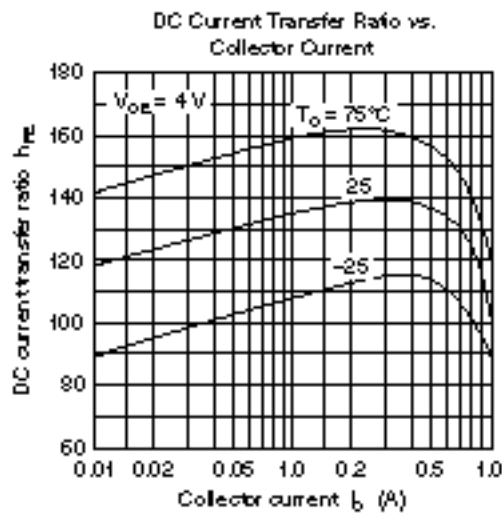
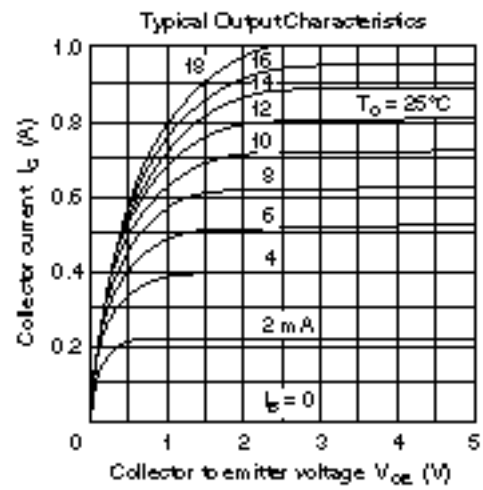
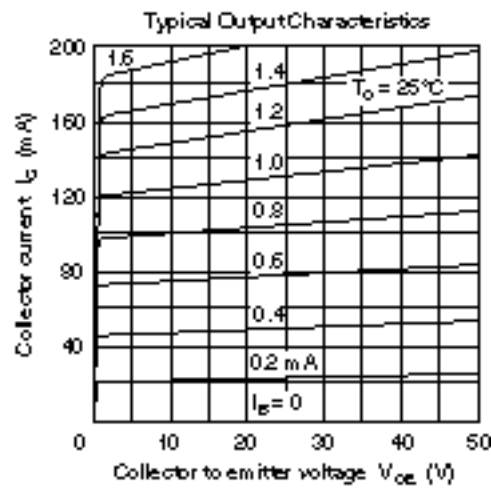
### Electrical Characteristics (Ta = 25°C)

Item	Symbol	2SC1212			2SC1212A			Unit	Test conditions
		Min	Typ	Max	Min	Typ	Max		
Collector to base breakdown voltage	$V_{(BR)CBO}$	50	—	—	80	—	—	V	$I_C = 1 \text{ mA}, I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	50	—	—	80	—	—	V	$I_C = 10 \text{ mA}, R_{BE} =$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	4	—	—	4	—	—	V	$I_E = 1 \text{ mA}, I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	5	—	—	5	$\mu\text{A}$	$V_{CB} = 50 \text{ V}, I_E = 0$
DC current transfer ratio	$h_{FE}^{*1}$	60	—	200	60	—	200		$V_{CE} = 4 \text{ V}, I_C = 50 \text{ mA}$
	$h_{FE}$	20	—	—	20	—	—		$V_{CE} = 4 \text{ V}, I_C = 1 \text{ A}$ (pulse test)
Base to emitter voltage	$V_{BE}$	—	0.65	1.0	—	0.65	1.0	V	$V_{CE} = 4 \text{ V}, I_C = 50 \text{ mA}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	0.75	1.5	—	0.75	1.5	V	$I_C = 1 \text{ A}, I_B = 0.1 \text{ A}$ (pulse test)
Gain bandwidth product	$f_T$	—	160	—	—	160	—	MHz	$V_{CE} = 4 \text{ V}, I_C = 30 \text{ mA}$

Note: 1. The 2SC1212 and 2SC1212A are grouped by  $h_{FE}$  as follows.

B	C
60 to 120	100 to 200





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## 2SC1212, 2SC1212A

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